

Adjustable Speed Drives
IPSC and ALSTOM Meeting
September 16, 2003

As a result of our meeting on the 16th, questions were raised which required responses from ALSTOM. Additionally, after our site inspection and meeting discussions, we have made significant modifications to further increase our overall drive reliability.

1. Contact person at Mississippi

Joel Serafin – Manager Technical Services Phone: 205-257-1348

2. Installation procedures for the first drive (2 channels)

As a result of our site inspection, the first drive will be supplied with three shipping splits. Each shipping section will be mounted on its own pallet for shipment to the site. Before lifting to the second story drive room, each section would be transferred to a framed tank roller assembly. We would assume the lift to the second story would be accomplished via a forklift. The maximum lift would be approximately 1500 pounds.

Once on the second floor, each section would be moved into place on the roller assembly. Reactors 16, 22 and 24 would have to be moved to allow passage of the sections because of present overhead height restrictions. Alternatively, the sections could be rotated to allow passage but this would complicate the rigging process.

In addition to the service time already included, ALSTOM will provide a factory technician at no charge for a week (5 days) to assist in the installation process.

3. Drive Redundancy and Reliability Issues

As a result of our meeting, ALSTOM proposes to make the following physical configuration changes to our drive line-up.

- Each channel will be provided with its own cooling cabinet. The cooling cabinet of each channel will have redundant pumps and motors. Each channel cooling cabinet will have a plate type water-to-water heat exchanger. IPSC will need to supply as a minimum 5GPM of 20°C water to each channel.
- Each drive channel will be provided with its own expanded HMI. The HMI screen will be mounted on the drive regulator cabinet of each channel. The common controller cabinet will be eliminated.
- The changes made will result in the drive channels being duplicates of each other. Each channel will be fully independent.
- Revised drawings for each of the channels have been attached showing the configuration changes and the shipping splits.

4. Pricing Impact

For the modifications and expanded scope covered by items 2 and 3 above, ALSTOM will maintain the prices as quoted in our Proposal SAD 00149 dated September 4, 2003.